# Strategies for Global Manufacturing

## The New Intelligent Manufacturing Systems (IMS) Strategy

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# IMS Background

- Industry-led, global, collaborative research and development program providing the framework for conducting international manufacturing research
- Japanese initiative proposed in 1989 with a vision of global industrial cooperation and technology sharing
- Feasibility study conducted in 1992 – 1994; formal program began in 1995 with seven participating Regions
- Structure consists of:
  - International Steering Committee (ISC) led by a Chairman
  - Inter-Regional Secretariat (IRS)
  - Head of Delegation for each Region
  - Regional Secretariat in each Region
- ISC Chairmanship and IRS rotates every two years (currently headed by Switzerland)
- Vision Forums on the future of advanced manufacturing held periodically
- Intellectual Property (IP) protected

# Why IMS? (Rationale)

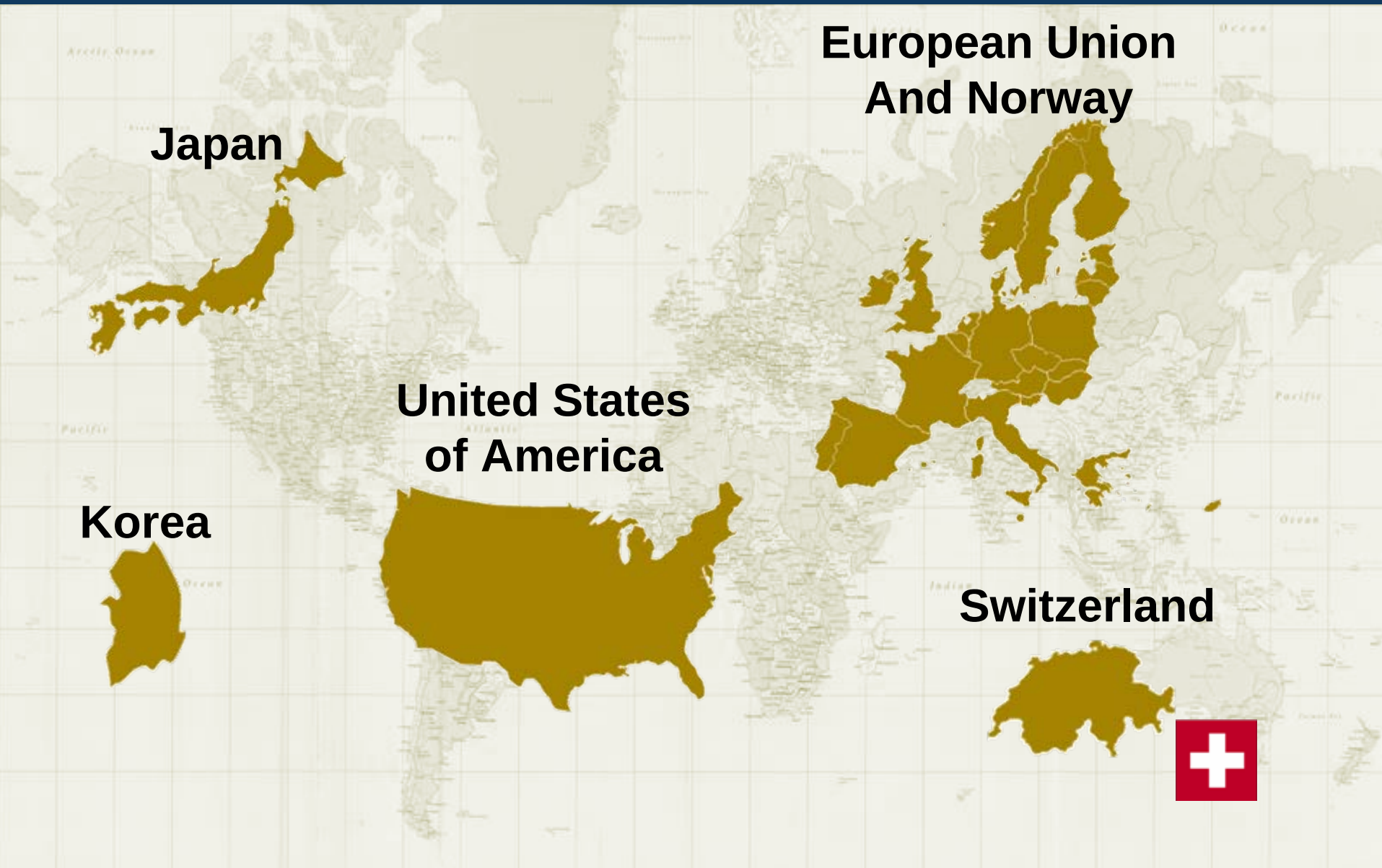
- Recent advances in electronic networks make global-level collaboration feasible and cost effective
- Environmental aspects of manufacturing and consumption cannot be tackled on merely a local or national level
- Effective use of knowledge as a foundation for addressing world-wide problems requires access to all available knowledge sources
- Manufacturing is no longer a national or regional concern. Consumers are demanding a free flow of products and services which requires a global scope

*While many countries have negotiated bi-lateral agreements to conduct cooperative research, the IMS charter takes this one step further -- facilitating global solutions to manufacturing challenges on a* ***multi-lateral basis.***

# What is the IMS Vision?

- Enlarge and open world-wide markets
- Improve the utilization efficiency of resources (sustainable)
- Significantly enhance the quality of life in the world community through new product creation
- Enable greater standardization and sophistication in manufacturing operations
- Improve the quality of the manufacturing environment and the global environment
- Disseminate results of IMS projects and transfer knowledge
- Advance manufacturing professionalism

# Who are the Member Regions?



# The New IMS Strategy

## Focus on Manufacturing Technology Platforms (MTPs)

- What are MTPs?

  Knowledge sharing platforms meant to facilitate the exchange of information and generate new ideas and research goals

- What is unique about MTPs versus traditional IMS projects?

  Ongoing or new start Regional initiatives can be integrated within an MTP and “kicked off” under a simple Memorandum of Agreement

# The New IMS Strategy

- What are the five Manufacturing Technology Platforms (MTPs)?
  - Sustainability
  - Energy Efficiency
  - Key Technologies
  - Standards
  - Education

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***1. Sustainability***

***Sustainable manufacturing is a platform for development of innovative manufacturing technologies which address world wide resources shortages and excess environmental load to enable an environmentally benign life cycle.***

***2. Energy Efficiency***

***Energy Efficient manufacturing is a platform for improving efficiency and reducing the carbon footprint in energy utilization for manufacturing and operational processes. The energy efficiency platform will result in reduced manufacturing costs and global warming impact.***

***3. Key Technologies***

***Key Technologies is a platform that includes those technologies that will yield a high impact on the next generation of manufacturing. These technologies include Model Based Enterprise, nanotechnology, and Smart materials.***

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### *4. Standards*

***Standards is a platform that will focus on manufacturing research issues that can benefit from standardization to create open manufacturing and product standards that are accessible to everyone and enhance innovation globally. IMS involvement in standards would also focus on key areas where the lack of standards is impeding progress in any of the other MTP areas.***

### *5. Education*

***Education is a platform for educational programs designed for an information based knowledge worker environment that supports manufacturing in the future. Research listed under this platform will contribute to the development of a coherent vision of manufacturing education across the whole vocational and professional community.***

# The New IMS Strategy

- Who are the Regional Leaders / Promoters?
  - Sustainability -- Switzerland, Japan
  - Energy Efficiency -- Korea
  - Key Technologies -- USA
  - Standards -- EU / Norway, USA
  - Education -- EU / Norway

# The New IMS Strategy

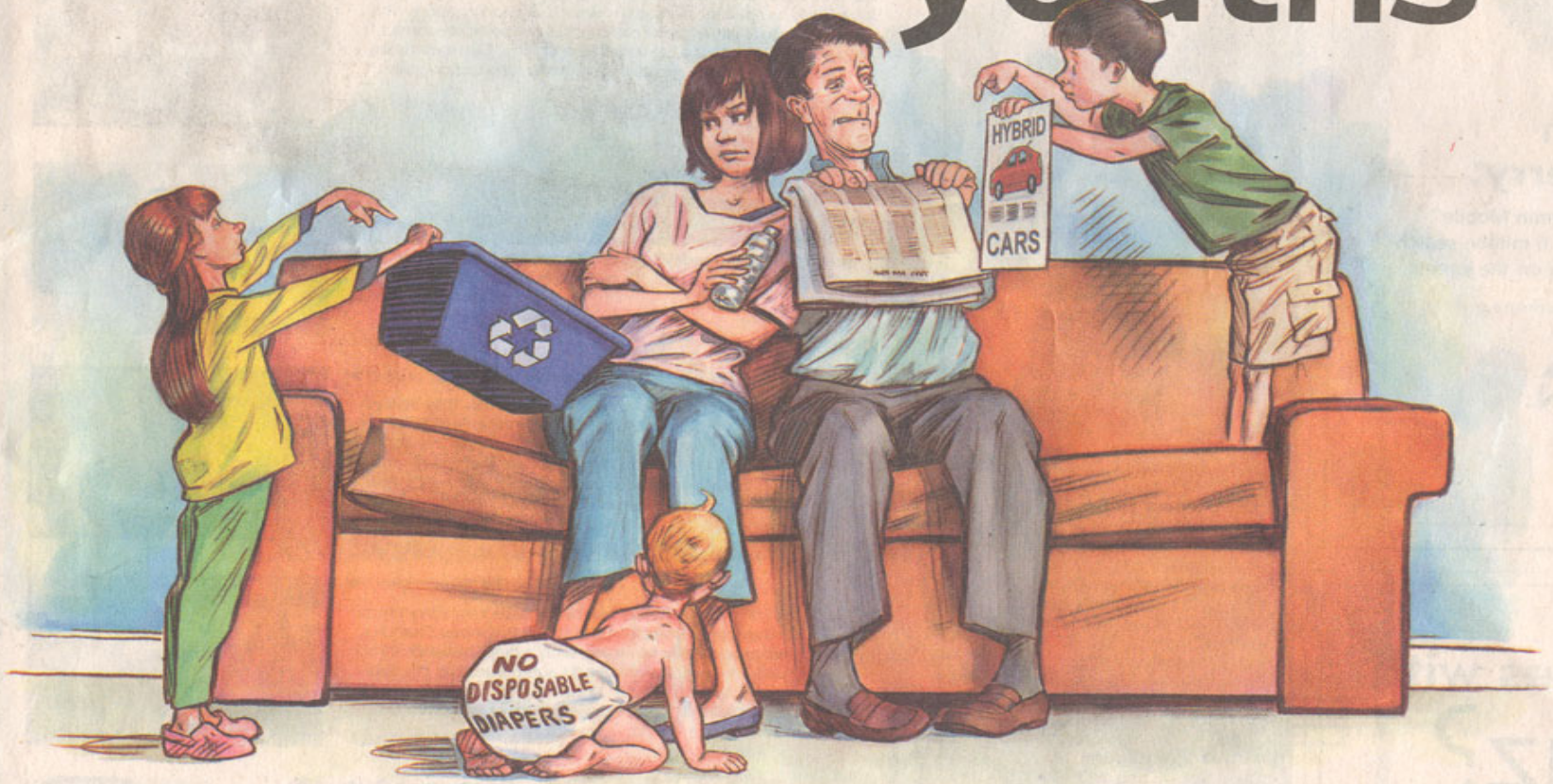
- What are the Requirements for an MTP initiative?
  - Three or more participating Regions sign a Memorandum of Agreement
  - Minimum resource / funding level of $1M
  - Funding for meetings/workshops provided by each partner or participating IMS Region
  - Minimum duration of 12 months
  - Partners will meet a minimum of two times per year
    - » May meet in conjunction with the ISC meetings

# Conclusion

***The new IMS strategy provides a strong framework for global cooperative research, facilitates quick consortium formation and networking on a global basis, and stimulates the broad dissemination of information from these initiatives.***

***In so doing, we will enhance the quality of life of the world community.***

# inconvenient youths




*'Mom, we gotta buy a hybrid!' Kids are becoming the green movement's stealth weapon, pressuring their parents on everything from lightbulbs to composting. Inside the push to create the littlest eco-warriors.*


Prof. Claudio Boer
Head of Delegation, Switzerland